

What Is Claimed Is:

*Sub B1*

1. A system for transferring a file from a first location to a second location, comprising:  
5 a logic control for establishing at least two logical channels between the first and second locations; and  
a transmission device for transmitting at least a first portion of the file over a first logical channel and for transmitting a second portion of the file over at least a second logical channel independently of the transmission of the first portion of the file.

10 2. The system of claim 1, wherein the transmission device transmits the first and second portions asynchronously.

15 3. The system of claim 1, wherein the first portion corresponds to a beginning portion of the file and the second portion corresponds to an ending portion of the file, and  
wherein the first and second portions of the file are transmitted at overlapping times.

20 4. The system of claim 1, wherein the first portion corresponds to a beginning portion of the file and the second portion corresponds to an ending portion of the file, and  
wherein the second portion is transmitted before the first portion.

25 5. The system of claim 1, wherein the logic control includes a first logic for assigning a transmission queue to each logical channel such that each transmission queue stores the portion of the file being transmitted over the corresponding logical channel, the transmission queue being held in a memory.

6. The system of claim 5, further comprising:  
allocation logic for assigning the portions of the data file to respective transmission queues.

7. The system of claim 6, wherein the allocation logic assigns the portions of the data file to respective transmission queues according to a quality of service associated with the logical channel corresponding to the respective transmission queue.

5 8. The system of claim 6, wherein the allocation logic assigns the portions of the data file to respective transmission queues according to a selected priority.

9. The system of claim 6, wherein the allocation logic assigns the portions of the data file to respective transmission queues according to a round robin procedure.

10 10. The system of claim 6, wherein the allocation logic assigns the portions of the data file to respective transmission queues by filling a respective transmission queue until full and then filling another transmission queue.

15 11. The system of claim 6, wherein the allocation logic assigns the portions of the data file to respective transmission queues by filling a respective transmission queue to a predetermined level and then filling another transmission queue to the predetermined level.

12. The system of claim 1, wherein the transmission device transmits the at least one of the portions to an intermediate location before the at least one portion is transmitted to the second location.

13. A method for transferring a file from a first location to a second location, comprising:

25 establishing at least two logical channels between the first and second locations; and transmitting at least a first portion of the file over a first logical channel and transmitting a second portion of the file over at least a second logical channel independently of the transmission of the first portion of the file.

30 14. The method of claim 13, wherein the step of transmitting includes the substep of transmitting the first and second portions asynchronously.

15. The method of claim 13, wherein the step of transmitting includes the substep of transmitting the first portion of the file corresponding to a beginning portion of the file and the second portion of the file corresponding to an ending portion of the file at overlapping times.

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16. The method of claim 13, wherein the step of transmitting includes the substep of transmitting the first portion of the file corresponding to a beginning portion of the file after the transmission of the second portion of the file corresponding to an ending portion of the file.

10 17. The method of claim 13, further comprising the step of assigning a transmission queue to each logical channel such that each transmission queue stores the portion of the file being transmitted over the corresponding logical channel, the transmission queue being held in a memory.

15 18. The method of claim 17, further comprising the step of assigning the portions of the file to respective transmission queues.

19. The method of claim 18, wherein step of assigning the portions of the file includes the substep of assigning the portions of the file to respective transmission queues according to a selected priority.

20 20. The method of claim 18, wherein step of assigning the portions of the file includes the substep of assigning the portions of the file to respective transmission queues according to a quality of service associated with the logical channel corresponding to the respective transmission queue.

25 21. The method of claim 18, wherein step of assigning the portions of the file includes the substep of assigning the portions of the file to respective transmission queues according to a round robin procedure.

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22. The method of claim 18, wherein step of assigning the portions of the file includes the substep of assigning the portions of the file to respective transmission queues by filling a respective transmission queue until full and then filling another transmission queue.

5        23. The method of claim 18, wherein step of assigning the portions of the file includes the substep of assigning the portions of the file to respective transmission queues by filling a respective transmission queue to a predetermined level and then filling another transmission queue to the predetermined level.

10      24. The system of claim 13, wherein the transmitting step includes the substep of transmitting the at least one of the portions to an intermediate location before the at least one portion is transmitted to the second location.

Sub A    25. A system for transferring a file from a source location to a target location, 15 comprising:

first logic control for determining the status of the transfer of the file from a source location to a target location and generating determined status information;

second logic control for generating a marker which holds a pointer to the source location of the data file; and

20      third logic control for retransmitting the file from the source location indicated by the pointer in the marker to the target location if the determined status information indicates that the transfer was incomplete.

26. The system of claim 25, further comprising:

25      fourth logic control for generating data messages corresponding to respective portions of the file and transmitting the data messages from the source location to the target location, wherein the second logic control generates a marker for each data message.

27. The system of claim 26, wherein the markers generated by the second logic 30 control are stored in a queue held in a memory.

28. The system of claim 26, wherein the markers generated by the second logic control are accessible to a computer system located at the source location and a computer system located at the target location.

5 29. The system of claim 25, wherein the marker holds the determined status information generated by the first control logic.

*Sub p2* 30. The system of claim 25, further comprising a memory for storing the file at the source location,

10 wherein the file is stored only in the memory at the source location during the file transfer.

31. A method for transferring a file from a source location to a target location, comprising:

15 determining the status of the transfer of the file from a source location to a target location and generating determined status information;

generating at least one marker, each marker holding a pointer to a source location of at least a portion of the file; and

20 retransmitting at least a portion of the file from the source location indicated by the pointer in the marker to the target location if the determined status information indicates that the transfer was incomplete.

32. The method of claim 31, further comprising the step of generating data messages corresponding to different respective portions of the file and transmitting the data messages from the source location to the target location,

wherein the second logic control generates a marker for each data message, and the pointer of each data message marker points to the source location of the different respect portion of the file in each data message.

30 33. The method of claim 32, further comprising the step of storing the generated markers in a queue held in a memory.

34. The method of claim 32, wherein the generated markers are accessible to a computer system located at the source location and a computer system located at the target location.

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35. The method of claim 34, further comprising the step of holding the determined status information.

10 Sub A3 36. The method of claim 31, further comprising the step of storing the file only in a single memory location at the source location during the file transfer.

15 37. A file transfer system, comprising:  
a requesting computer for submitting a request to transfer a data file;  
a managing computer for receiving the transfer request, identifying the location of the data file, and passing the transfer request to that location;  
a source computer, identified as having the data file by the managing computer, for receiving the transfer request from the managing computer and transferring the data file to a target location; and  
20 a target computer, corresponding to the target location, for receiving the transferred data file from the source computer.

25 38. A file transfer system according to claim 37, wherein the requesting computer, the managing computer, the source computer, and the target computer are separate and independent computers.

39. A file transfer system according to claim 38, wherein the requesting computer, the managing computer, the source computer, and the target computer are resident in separate and independent locations.

40. A file transfer system according to claim 37, wherein the requesting computer, and the source computer are a single computer, and the managing computer and the target computer are separate and independent computers.

5 41. A file transfer system according to claim 37, wherein the requesting computer, and the target computer are a single computer, and the managing computer and the source computer are separate and independent computers.

10 42. A file transfer method, comprising the steps of:

submitting a request to transfer a data file at a requesting computer; receiving the transfer request at a managing computer, identifying the location of the data file, and passing the transfer request to that location;

15 receiving the transfer request at a source computer, identified as having the data file by the managing computer, from the managing computer and transferring the data file to a target location; and

receiving at a target computer, corresponding to the target location, the transferred data file from the source computer.

20 43. A file transfer method according to claim 42, wherein the requesting computer, the managing computer, the source computer, and the target computer are separate and independent computers.

25 44. A file transfer method according to claim 43, wherein the requesting computer, the managing computer, the source computer, and the target computer are resident in separate and independent locations.

45. A file transfer method according to claim 42, wherein the requesting computer, and the source computer are a single computer, and the managing computer and the target computer are separate and independent computers.

46. A file transfer method according to claim 42, wherein the requesting computer, and the target computer are a single computer, and the managing computer and the source computer are separate and independent computers.

5 47. A system for transferring a file from a first location to a second location, comprising:

a logic control for receiving a request to transfer the file from the first location to the second location; and

10 a transmission device for transmitting at least a first portion of the file asynchronously from a transmission of a second portion of the file.

15 48. A system according to claim 47, wherein the transmission device completes the transmission of the file regardless of whether a logical connection, over which at least one portion of the file is transferred, is broken during the transmission.

49. A method for transferring a file from a first location to a second location, comprising the steps of:

receiving a request to transfer the file from the first location to the second location; and

transmitting at least a first portion of the file asynchronously from a transmission of a second portion of the file.

20 50. A method according to claim 49, wherein the step of transmitting includes the substep of completing the transmission of the file regardless of whether a logical connection, over which at least one portion of the file is transferred, is broken during the transmission.

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